

Please type a plus sign (+) inside this box → ☐

PTO/SB/05 (4/98)
Approved for use through 09/30/2000. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b))

Attorney Docket No. 367.38905X00

First Inventor or Application Identifier Jesper ANDERSEN

Title See 1 in Addendum

Express Mail Label No.

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

1. ☒ * Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☒ Specification [Total Pages 14]
(preferred arrangement set forth below)
 - Descriptive title of the Invention
 - Cross References to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to Microfiche Appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 9]
4. Oath or Declaration [Total Pages]
 - a. ☐ Newly executed (original or copy)
 - b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))
(for continuation/divisional with Box 16 completed)
 - i. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting
inventor(s) named in the prior application,
see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

NOTE FOR ITEMS 1 & 13 IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28).

5. ☐ Microfiche Computer Program (Appendix)
6. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)
 - a. ☐ Computer Readable Copy
 - b. ☐ Paper Copy (identical to computer copy)
 - c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

7. ☐ Assignment Papers (cover sheet & document(s))
8. ☐ 37 C.F.R. § 3.73(b) Statement ☐ Power of Attorney
(when there is an assignee)
9. ☐ English Translation Document (if applicable)
10. ☐ Information Disclosure ☐ Copies of IDS
Statement (IDS)/PTO-1449 Citations
11. ☐ Preliminary Amendment
12. ☒ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
13. ☐ * Small Entity ☐ Statement filed in prior application
Statement(s) Status still proper and desired
(PTO/SB/09-12)
14. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
15. ☒ Other: FIGS. 1-12
CREDIT CARD PAYMENT FORM

16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No. _____

Prior application information: Examiner _____

Group / Art Unit: _____

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

17. CORRESPONDENCE ADDRESS

☒ Customer Number or Bar Code Label

020457

or ☐ Correspondence address below

(Insert Customer No. or Attach bar code label here)

Name			
Address			
City	State	Zip Code	
Country	Telephone	Fax	

Name (Print/Type) Carl I. Brundidge

Registration No. (Attorney/Agent) 29,621

Signature

Date 8-23-00

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

Table 1. Demographic characteristics of the study population	
Age (years)	65.0 ± 10.0
Gender	
Male	50 (50.0%)
Female	50 (50.0%)
Education (years)	12.0 ± 2.0
Marital status	
Married	40 (80.0%)
Single	10 (20.0%)
Occupation	
Retired	30 (60.0%)
Unemployed	20 (40.0%)
Income (USD/month)	1,200 ± 300
Health status	
Good	30 (60.0%)
Poor	20 (40.0%)
Comorbidities	
Hypertension	15 (30.0%)
Diabetes	10 (20.0%)
Cholesterol	12 (24.0%)
Smoking status	
Smoker	10 (20.0%)
Non-smoker	40 (80.0%)
Alcohol consumption	
Regular	5 (10.0%)
Occasional	15 (30.0%)
Never	30 (60.0%)

- | Table 1. Demographic characteristics of the study population | |
|--|-------------|
| Age (years) | 65.0 ± 10.0 |
| Gender | |
| Male | 50 (50.0%) |
| Female | 50 (50.0%) |
| Education (years) | 12.0 ± 2.0 |
| Marital status | |
| Married | 40 (80.0%) |
| Single | 10 (20.0%) |
| Occupation | |
| Retired | 30 (60.0%) |
| Unemployed | 20 (40.0%) |
| Income (USD/month) | 1,200 ± 300 |
| Health status | |
| Good | 30 (60.0%) |
| Poor | 20 (40.0%) |
| Comorbidities | |
| Hypertension | 15 (30.0%) |
| Diabetes | 10 (20.0%) |
| Cholesterol | 12 (24.0%) |
| Smoking status | |
| Smoker | 10 (20.0%) |
| Non-smoker | 40 (80.0%) |
| Alcohol consumption | |
| Regular | 5 (10.0%) |
| Occasional | 15 (30.0%) |
| Never | 30 (60.0%) |

COMMUNICATION UNIT WITH PERSONALISING FEATURE

Background of the Invention

The invention relates to a communication unit having features for making the communication unit more personalised. The personalising feature includes a holder for providing the communication unit with a picture.

It is known from e.g. mobiles phones made by Nokia™ to personalise a mobile phone by changing cover parts to a personal choice, to change the ringing-tune to a personal one or to download a personally selected operator icon. Its is also known that the user can create the ringing tunes and the operator icon by himself if he wants to. There are several websites on the Internet providing tools for downloading personally chosen ringing-tunes or operator icons, as well as tools for the user to create his/her own personal ringing-tunes or operator icons.

Summary of the Invention

The claimed invention provides a mobile phone with a possibility for the user to personalise his/her phone with a picture or for anyone selling phones to provide their phones with specific picture. The picture is, according to a first preferred embodiment, placed in a picture guide or holder placed in a cover part of the mobile phone covering the battery. The user can easily remove or open the guide/holder and replace the personal picture with another personal picture. The picture is visible through a transparent part of the cover part of the phone. In another preferred embodiment the picture has been placed in a holder in the display assembly of a mobile phone.

An object of the invention is to provide flexible means for a user to personalise his/her communication unit.

According to a first preferred embodiment of the claimed invention is this objective obtained by a picture guide for a communication unit having a holder for holding a releasable picture, where the holder enables the user to easily place or replace a picture in the communication unit.

According to another preferred embodiment of the claimed invention is this objective obtained by a holder holding a releasable picture located in the display assembly of the communication unit enabling the user to easily place or replace a personal picture in the communication unit.

Another objective of the claimed invention is to provide a method for personalising a communication unit.

According to the claimed invention this objective is obtained by a method providing the communication unit with a holder or picture guide and placing or replacing a picture in the holder or picture guide.

Brief Description of the Drawings

The invention will be explained more fully below, by way of example, in connection with preferred embodiments and with reference to drawing, in which:

Figure 1-2 shows in a perspective view a preferred embodiment of the communication unit according to the invention.

Figure 3 schematically shows the essential parts of a telephone for communication with a cellular network.

Figure 4 shows a cover part of a communication unit with a picture guide according to a preferred embodiment.

Figure 5 shows a cover part of a communication unit with a picture guide according to a second preferred embodiment.

Figure 6 shows a cover part of a communication unit with a picture guide according to a third preferred embodiment.

Figure 7 shows a cover part of a communication unit with a picture guide according to a fourth preferred embodiment.

Figure 8 shows a picture in a communication unit according to another embodiment located behind the display of the communication unit.

Figure 9 shows the embodiment in figure 8 having the front cover removed according to a first alternative embodiment.

Figure 10 shows the embodiment in figure 8 having the front cover removed according to a second alternative embodiment.

Figure 11-12 shows different inserts that are used together with the second alternative embodiment in figure 10.

Detailed Description of the Invention

According to a first aspect the communication unit with personalising feature according to the invention will be described with reference to a hand portable phone, preferably a cellular/mobile phone. A preferred embodiment of this phone is shown in figure 1 and 2, where a cellular/mobile phone is shown in perspective. As will be seen, the phone is provided with a front cover 2 having a window frame 3 encircling the protection window of the display assembly 1. The cellular/mobile phone comprises a user interface having an on/off button 4, a keypad 7, a battery 14 (not shown), a display/LCD 43, an earpiece 21 and a microphone 22 (not shown). The phone is in figure 2 shown from another

The horseshoe shaped recess 12 aims to prevent the user from covering the internal antenna 24 (not shown) placed in the upper part of the phone with his fingers. Any covering of the antenna 24 by the user might disturb the function of the antenna 24. The horseshoe shaped recess 12 is ergonomically designed to make the user place his fingers on it and not on the antenna part of the back cover 13.

The keypad 7 additionally comprises a menu selection key 9, a up/down key 10, and a cancel key 11. The functionality of the menu selection key or NaviKey™ 9 depends on the state of the phone. The NaviKey™ 9 is used together with the up/down key 10, where the selection/navigation is made by the NaviKey™ 9 and the scrolling in the menus is made by the up/down key 10. The functionality of the NaviKey™ 9 changes depending on the menus and its present functionality is shown in a separate field in the display 43 just above the NaviKey™ 9. The cancel key 11 is used to delete an input or cancel the last selection and jump to the previous menu level.

The menu selection key 9 is placed centrally on the front surface of the phone between the display 43 and the group of alphanumeric keys 8. Hereby the user will be able to control this key 9 with his thumb. This is the best site to place an input key requiring precise motor movements. Many experienced phone users

are used to one-hand handling. They place the phone in the hand between the fingertips and the palm of the hand. Hereby the thumb is free for inputting information.

Figure 3 schematically shows the most important parts of a preferred embodiment of the phone/terminal, said parts being essential to the understanding of the invention. The microphone 22 records the user's speech, and the analogue signals formed thereby are A/D converted in an A/D converter (not shown) before the speech is encoded in an audio part 20. The encoded speech signal is transferred to the controller 18 (physical layer processor), which e.g. supports GSM terminal software. The controller 18 also forms the interface to the peripheral units of the apparatus, including RAM and ROM memories 17a and 17b, a SIM card 16, the display 43 and the keypad 7 (from figure 1) as well as data, power supply, etc. The controller 18 communicates with the transmitter/receiver circuit 19. The audio part 20 speech-decodes the signal, which is transferred from the controller 18 to the earpiece 21 via a D/A converter (not shown).

The preferred embodiment of the phone of the invention is adapted for use in connection with a GSM network, but, of course, the invention may also be applied in connection with other phone networks. It could be cellular networks, various forms of cordless phone systems or in dual band phones accessing sets of these systems/networks.

The controller 18 is connected to the user interface of the mobile phone. Thus, it is the controller 18, which monitors the activity in the phone and controls the display 43 in response thereto.

Therefore, it is the controller 18, which detects the occurrence of a state change event and changes the state of the phone and thus the display text. The user may cause a state change event, when he/she activates the keypad 7 including the menu selection key or keys 9, and these type of events are called entry

An embodiment of the invention will be described with reference to figures 4 to 12 showing the various features of a communication unit with personalising feature.

A user lifts the plastic film 30 in the loose end 34 and places a picture under plastic film 30, where after the user releases the plastic film 30. The communication unit has been personalised. The picture is visible through a transparent part 25 on the back cover 13 (shown in figure 2). The user only lifts the plastic film 30 and removes the picture if he/she wants to replace with another the picture, or removes it without replacing if he/she so wishes. To facilitate the lifting the plastic film 30 could be provided with some finger grooves in one corner (not shown).

In figure 5 is shown another embodiment of the invention having attached to the small stickers 35 that are placed in all corners of the picture to keep it in place.

The stickers 35 could be of a disposable type or a reusable type, and does not harm the picture.

In figure 6 is a plastic film 36 or the like attached to the back cover 13 along three sides of the plastic film 36, creating a pocket, i.e. picture guide or holder 30, for holding a picture. The picture 39 can be inserted under the plastic film 36 by the fourth, open side 37 of the film 36.

In figure 7 a picture is placed on the back cover 13 having an adhesive, transparent film 38 that covers the picture 39 and attaches it to the back cover 13.

In the shown alternative embodiments the picture guide 30 is placed on the back cover 13 of the communication unit, but it is apparent that the holder or picture guide 30 could also be placed on a surface that is covered by the back cover 13 as long as the part of the back cover 13 covering the picture guide 30 is transparent. In the shown communication unit the back cover 13 covers an internal battery 14 and therefore the battery 14 might in this case be holding the holder or picture guide 30 or be the surface whereon the picture guide 30 is attached.

Furthermore is it apparent that the transparent part of the back cover 13, if the back cover 13 is not entirely transparent, could have other shapes than a rectangular shape although it has not been shown along with the preferred embodiments. The alternative shapes could perhaps be adjusted to the design of the phone-cover.

According to an alternative preferred embodiment of the communication unit shown in figure 8 the holder is located in the display assembly 1 having a picture 40 visible in the display 43. The holder in the display assembly 43 includes a slot created between the display 43 and the light guide 42, where the display 43 is

09644067 0823400 00E280 29044960

the front wall through which the picture 40 is visible and the light guide 42 is the back wall.

When the communication unit is in operating mode the display 43 will also normally show two bars indicating the signal strength and the battery level, an identification of the operator to which the phone is presently connected, a time indication and a label indicating the present functionality of the menu selection key or NaviKey™ 9. These indications are not shown in any figures for simplifying the figures. To replace picture 40 with another picture 40 or to remove entirely the front cover 2 is removed. The removal of the picture 40 will be described in connection with the description of figures 9 and 10.

In figure 9 the front cover 2 is removed and an inner part 41 of the communication unit is visible. The interesting details for this invention are the light guide 42, which stretches over the entire front of the inner part 41, a display 43, a display holder 44 and the picture 40. The light guide 42 transfer light from LED's to the keypad 7 shown in figure 8 and to the display 43. The display 43 is placed on top of the light guide 42 and is fastened to the light guide 42 by means of the display holder 44.

The picture 40 includes an extractive part 45 that stretches out from the holder behind the display 43 and enabling the user to pull out the picture 40 from the holder and replace it with another picture 40. The extractable part 45 could be a part of the picture 40 that just stretches out of the display 43 or a blank part serving just as an extractable part. There could also be indicated on the extractable part 45 a description (not shown) of what the picture 40 describes.

To be able to insert the picture 40 into the holder in the display assembly, but still illuminate the picture 40 by the light guide 42, a small slot has been created between the display 43 and the light guide 42, by removing some material from the top surface of the light guide 42. Normally the display 43 is placed close to the light guide 42, but having removed some material from the light guide 42 this

creates a small slot that enables the picture 40 to be inserted into the holder located behind the display 43. The holder being a slot where the display serves as the front wall and the light guide 42 as the back wall, and being made just as big as to receive a picture 40 covering the visual background of the display 43. Furthermore a sidewall (not shown) on the inner part 41 holding the light guide 42 to the inner part 41 has been modified to enable the insertion of the picture 40 behind the display 43.

In figure 10 a second alternative embodiment is shown having the picture 40 mounted on an insert 46 that has been inserted in the slot between the display 43 and the light guide 42. The insert 46 is preferably made in a transparent material to allow light from the light guide 42 to pass through, but might also be in a non-transparent material. The insert 46 with the picture 40 mounted fills the entire slot between the display 43 and the light guide 42 having an adhesive or other suitable holding means to hold the picture 40 onto the insert 46. Another way of holding the picture 40 to the insert 46 would be to insert the picture 40 into the insert or having an insert 46 squeezing the picture 40 at one end. In the latter embodiment the insert 46 might only be a plug that covers the opening to the slot between the display 43 and the light guide 42, and not projects into the slot.

In figure 11 is a cross section of an alternative embodiment of the insert 46, where the insert 46 includes a main body 47, a film 48 and a picture 40. The film 48 is attached to the main body 47 along two sides of the main body 47 and having a free part 49. Between the free part 49 of the film 48 and the main body 47 a picture 40 is located that can be easily removed and replaced with another picture 40. The free part 49 of the film 48 is pressed against the main body 47, holding the picture 40, when the insert 46 is inserted in the slot between the display 43 and the light guide 42. The outer part 50 of the film 48 is used as an extractable part to extract the insert 46 from the slot.

The picture 40 could also be an incorporated part of the insert 46 (see figure 12), where the user replaces the entire insert 46 including the picture 40 with another

insert 46 including another picture 40. The insert 46 shown in figure 12 does also includes an extractive part 51 to extract the insert 46 from the slot.

The transparency of the display 43 in the display assembly 1 can be adjusted by adding a semi-transparent film on the side facing the insert or closest to the light guide 42.

To replace the picture 40 in a communication unit according to the alternative embodiments shown in figure 9 and 10 the user will first remove the back cover 13 where after he/she removes the front cover 2. The next step is to extract the picture 40 or the insert 46 holding the picture 40 from the holder in the display assembly 1. The user gets hold of the extracting part on the picture 40 or insert 46 and pulls it out. He/she changes the extracted picture 40 or insert 46 to another one and inserts it again. The picture 40 or insert 46 holding the picture 40 has been changed in the communication unit according to the user's preference. In the case that the same insert 46 is used to hold both pictures 40 will the pictures 40 be changed in the insert 46 before the insert 46 is inserted into the holder again. After the picture 40 or insert 46 has been inserted the front cover 2 and the back cover 13 will be remounted on the communication unit again.

The picture 40 could be made of any suitable material that permits light to transfer through the material. The material used could be most kinds of paper, plastics or other any other material matching the specifications. The picture can be a personal photo, picture or image, but also any form of art, design, drawing, logo etc.

The invention is not limited to the above-described examples or to the drawings showing examples of an embodiment, but can be varied within the scope of the appended claims.

What is claimed is:-

1. Communication unit with a personalising feature being the exposure of a picture on the communication unit **characterised in** that the communication unit is provided with a holder for holding said releasable picture, and that said holder is provided with a cover part through which the picture is exposed.
2. Communication unit according to claim 1 **characterised in** that the picture is located on a cover part of the communication unit.
3. Communication unit according to claim 2 **characterised in** that the feature for exposing the picture includes a picture guide comprising a holding flap of a plastic film that is at one end attached to the cover part of the communication unit, and having an adhesive strip in the middle part of the flap.
4. Communication unit according to claim 3 **characterised in** that the adhesive strip in the middle part of the flap holds a picture in the same place while in the picture guide.
5. Communication unit according to claim 2 **characterised in** that the picture guide includes small stickers placed in all four corners of the picture.
6. Communication unit with a personalising feature being the exposure of a personal picture on the communication unit according to claim 2 **characterised in** that the picture guide includes a plastic film or the like that is attached to the cover part along three sides of the film.
7. Communication unit according to claim 2 **characterised in** that the picture guide includes an adhesive, transparent film whereon a photo has been placed, that is attached to the cover part.
8. Communication unit according to claim 1 **characterised in** that the holder is located in the display assembly.

09644067 082300

9. Communication unit according to claim 8 **characterised in** that the picture is inserted in said holder, that said picture includes a sheet having at least one picture part and one extractive part, and that the picture part has substantially the same size as the display and the extractable part projects from a slot between the display and a light guide wherein the picture part has been inserted.

10. Communication unit according to claim 8 **characterised in** that the holder is provided with an insert whereon the picture is mounted and that the insert is inserted in a slot between the display and a light guide.

11. A method for personalising a communication unit **characterised in** providing a communication unit with a holder and placing or replacing a picture in said holder.

12. A cover part for personalise a communication unit by exposing a picture on the communication unit **characterised in** that the cover part is provided with a picture guide for holding said releasable picture, and that said picture is provided with a cover part through which the picture is exposed.

13. A cover part according to claim 12 **characterised in** that the picture guide include a holding flap of a plastic film that is at one end attached to the cover part of the communication unit, and having an adhesive strip in the middle part of the flap.

14. A cover part according to claim 13 **characterised in** that the adhesive strip in the middle part of the flap holds a picture in the same place while in the picture guide.

006280 29044960

15. A cover part according to claim 12 **characterised in** that the picture guide includes small stickers that are placed in all four corners of the picture.

16. A cover part according to claim 12 **characterised in** that the picture guide includes a plastic film or the like that is attached to the cover part along three sides of the film.

17. A cover part according to claim 12 **characterised in** that the picture guide includes an adhesive, transparent film whereon a picture has been placed, that is attached to the cover part.

18. A method for personalise a communication unit **characterised in** placing a picture in a picture guide on a cover part of the communication unit.

002280 4904960

A communication unit with personalising feature, where the communication unit is provided with a holder for holding a releasable picture in an exposable place of the communication unit. The holder can according to the invention be located on either the back cover part of the communication unit or in a display assembly of the communication unit. In one embodiment the holder includes a plastic film that is attached along one of its sides to a transparent part of the communication unit, e.g. back cover part. The plastic film can be lifted and a picture can be placed between the holder and the back cover. To improve the holding feature of the holder the holder could be provided with an adhesive that holds the picture in its exposable position. In another embodiment the holder is included in the display assembly and having an insert that holds the picture in an exposable position.

Fig. 4.

Fig. 1

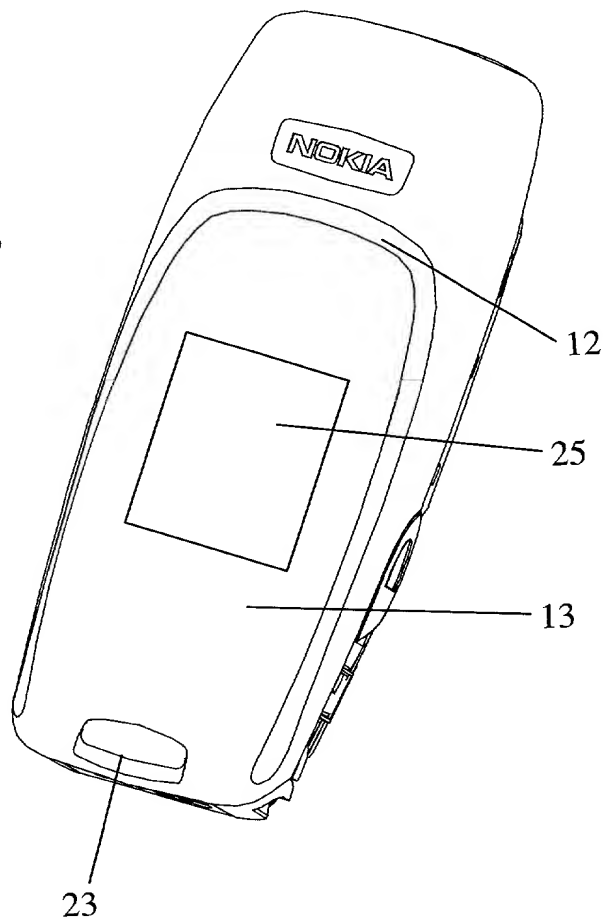
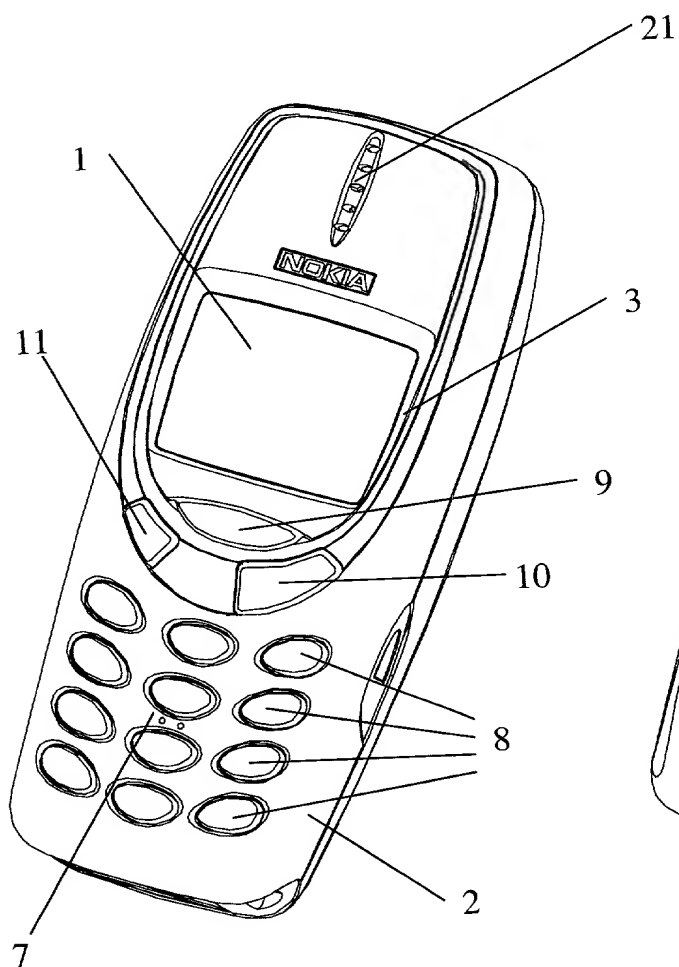


Fig. 2

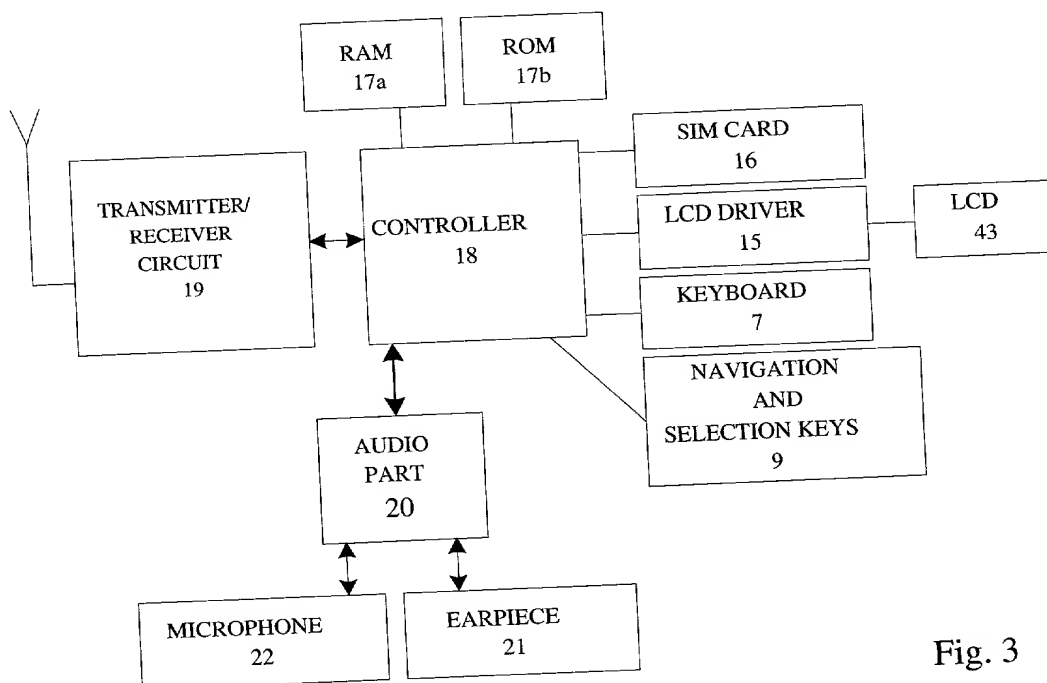


Fig. 3

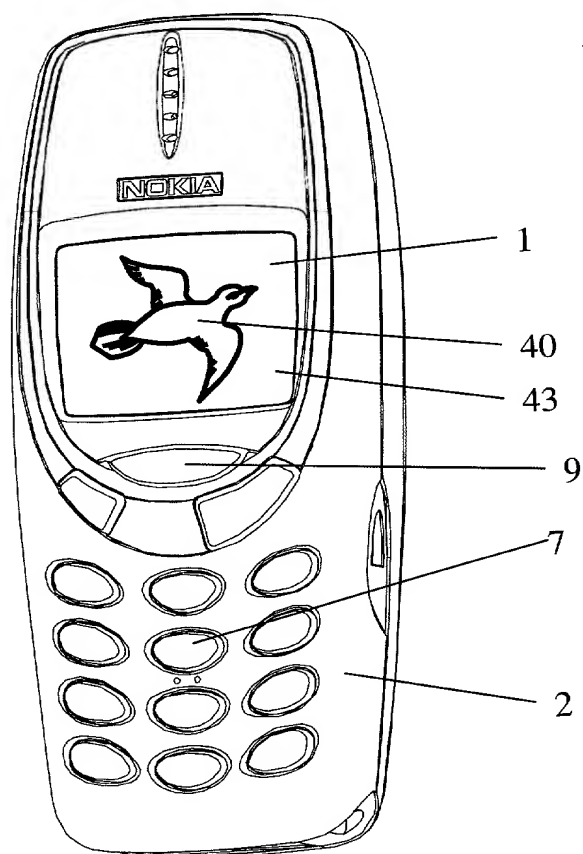


Fig. 8

Fig. 4

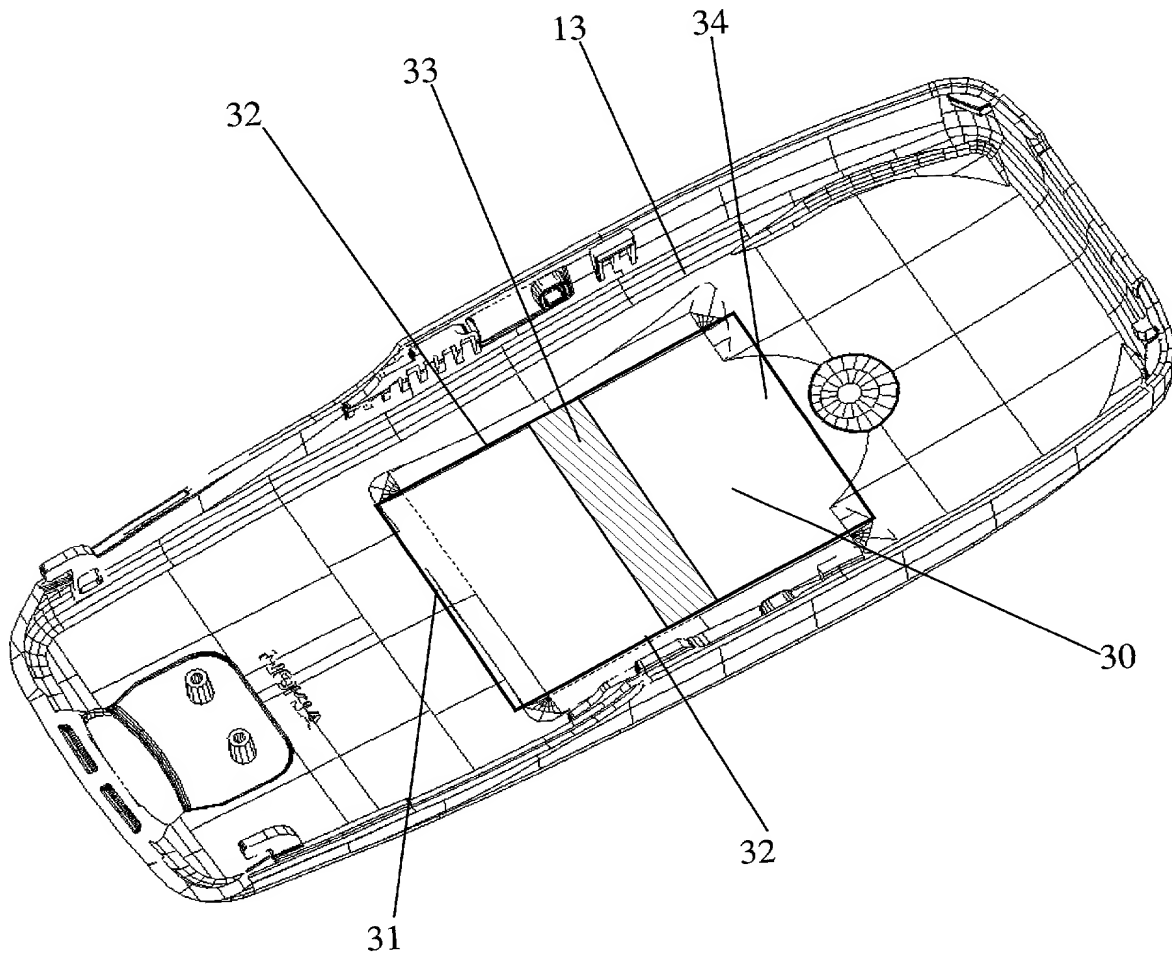


Fig. 5

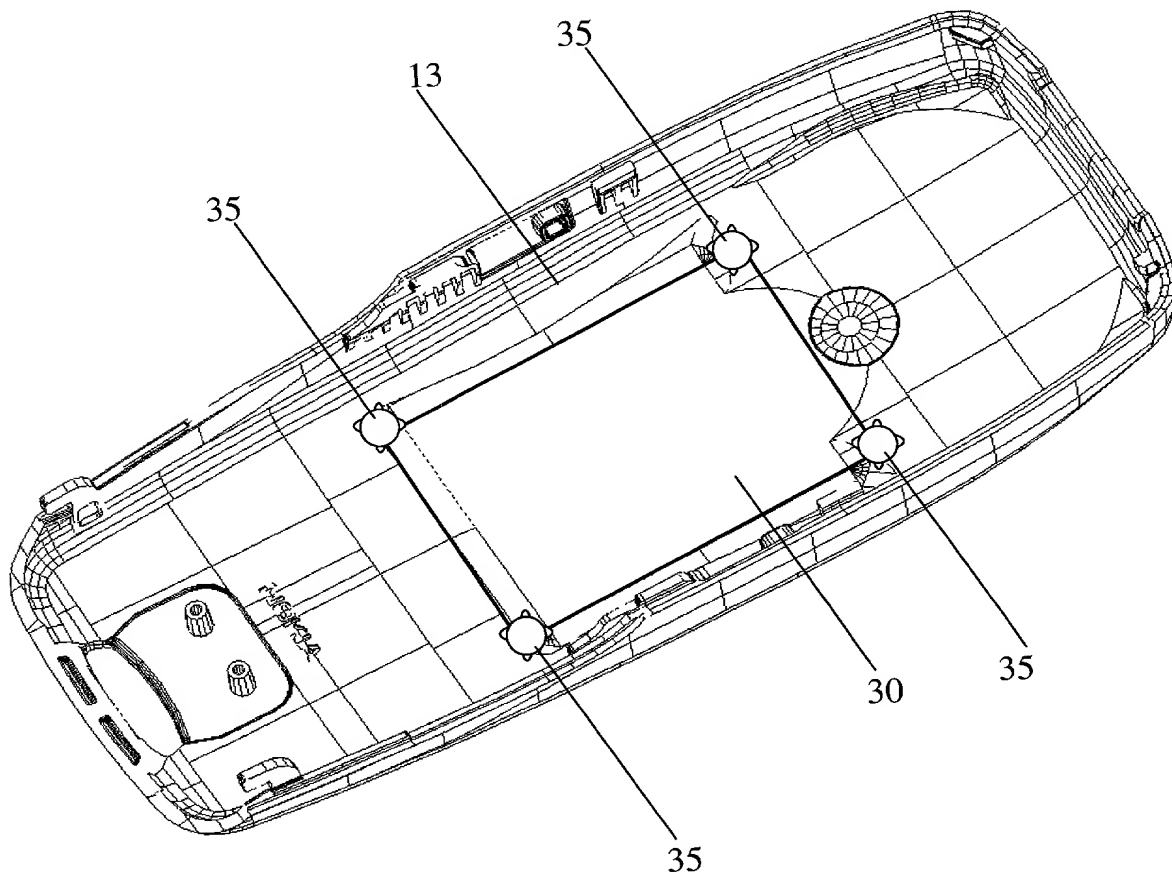


Fig. 6

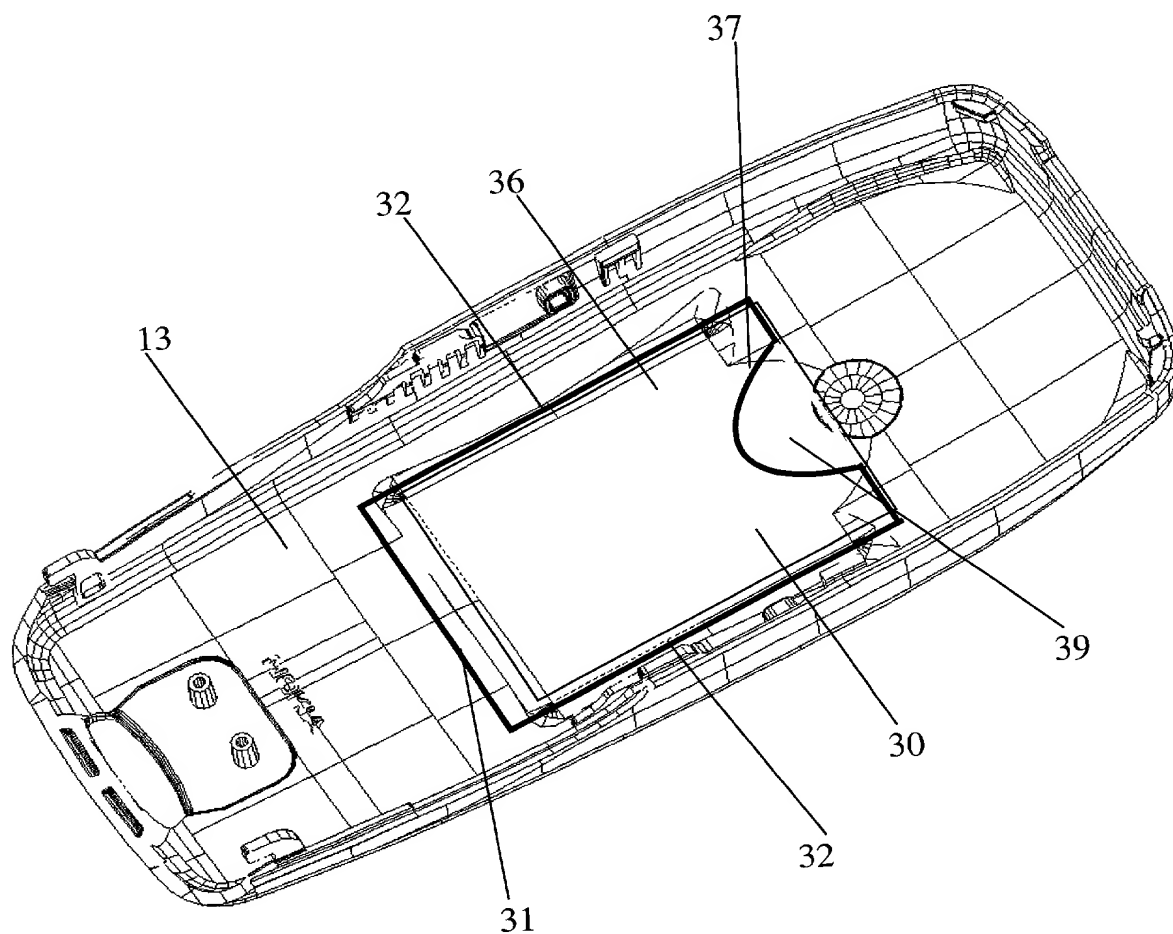


Fig. 7

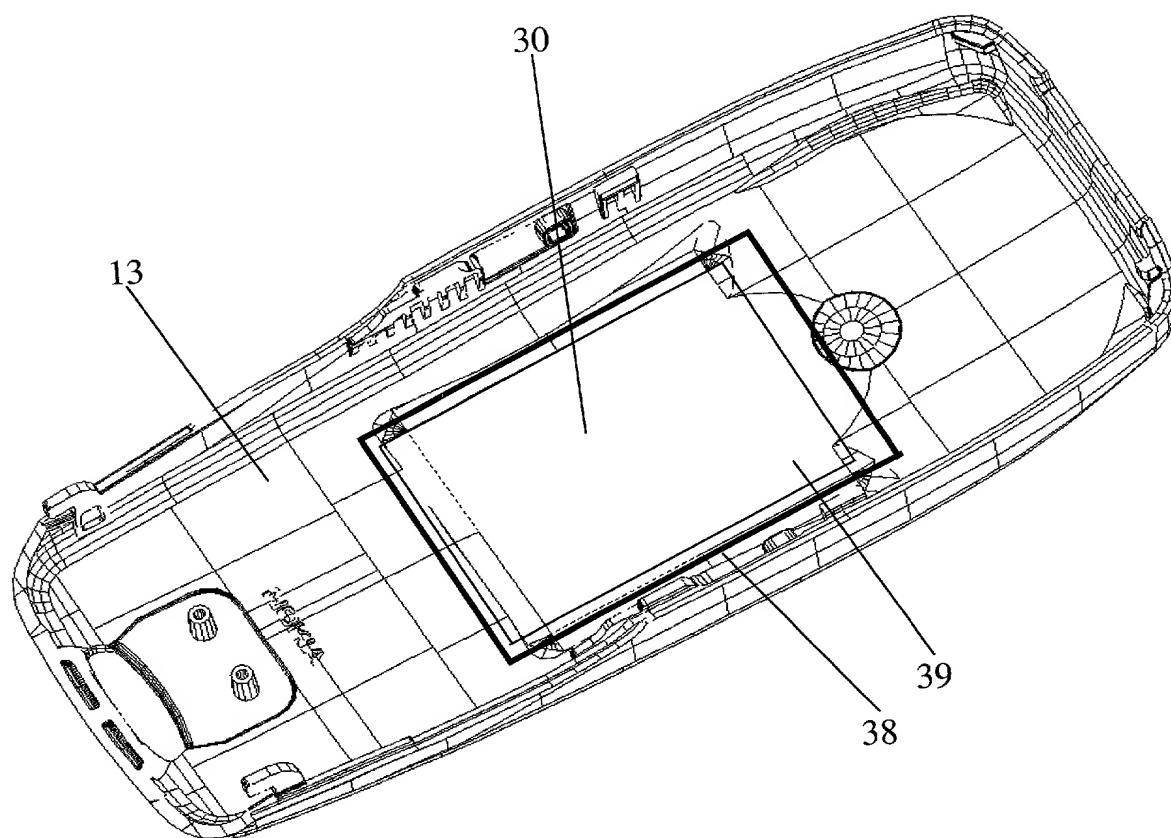


Fig. 9

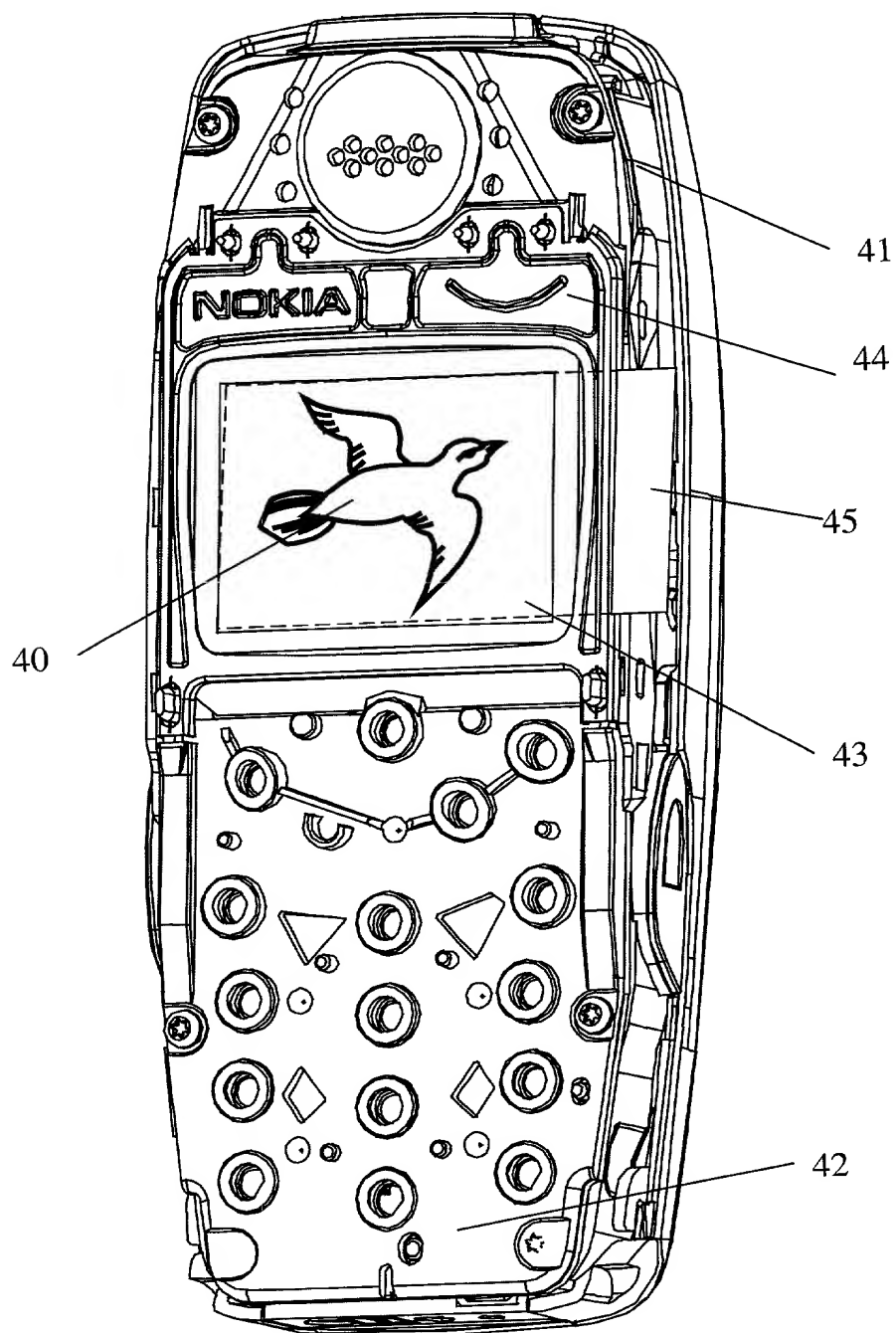


Fig. 10

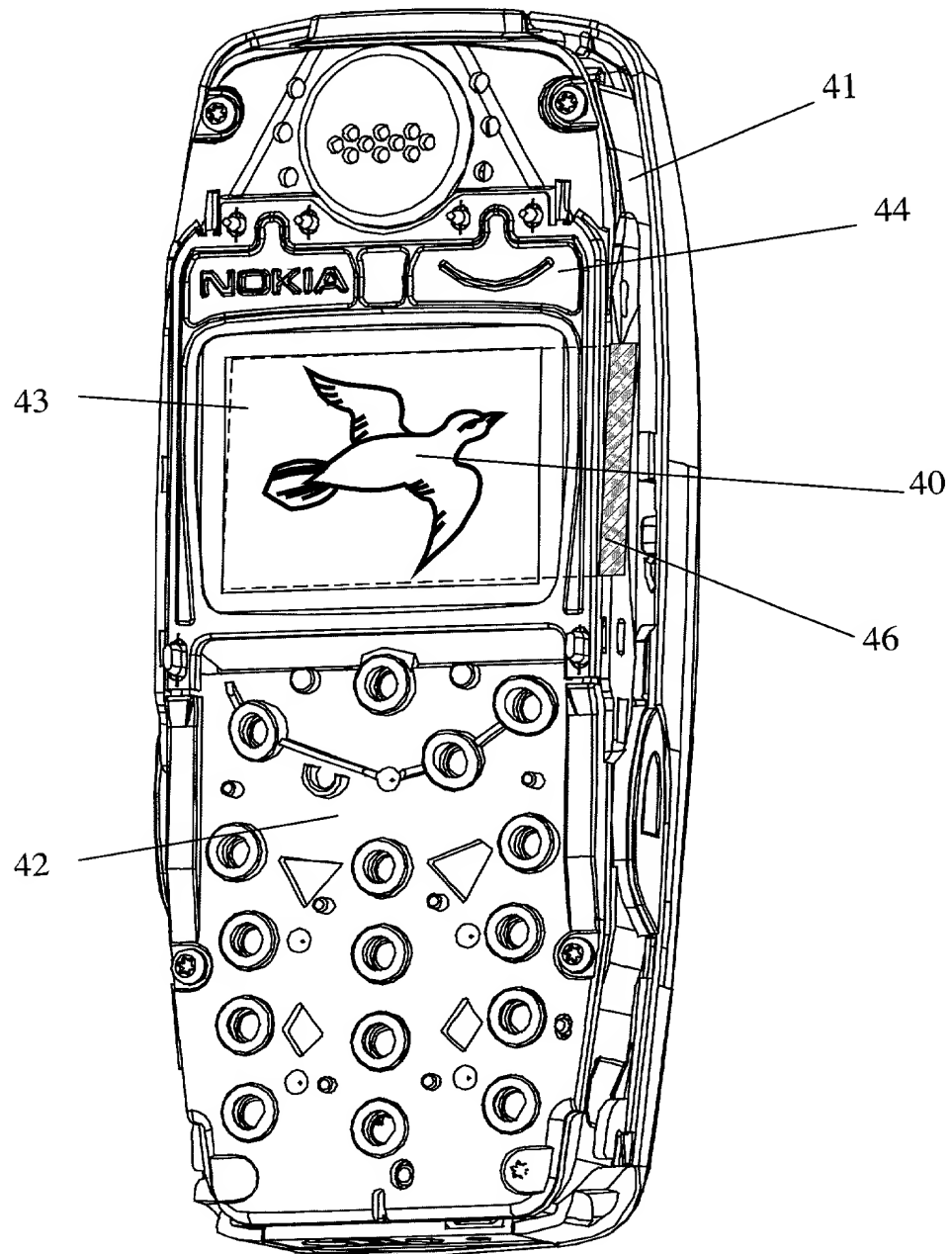


Fig. 11

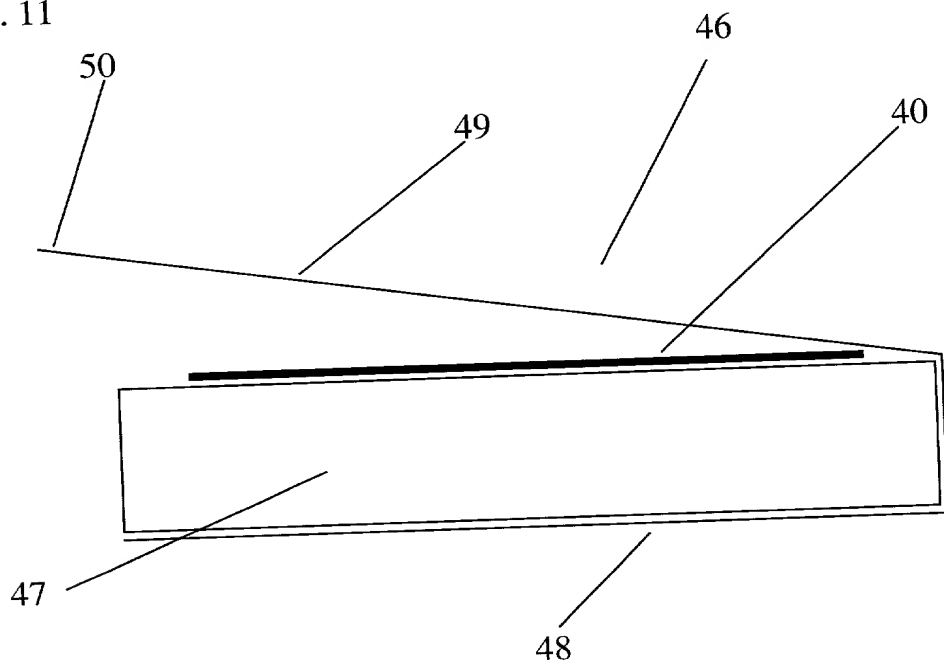


Fig. 12

